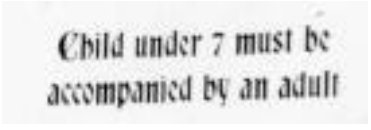
Transition to Middle Childhood

Age of Reason and Responsibility



“The 5 to 7 shift”

- Increased responsibility for tasks
- Less supervision
- Direct instruction

Components of the transition

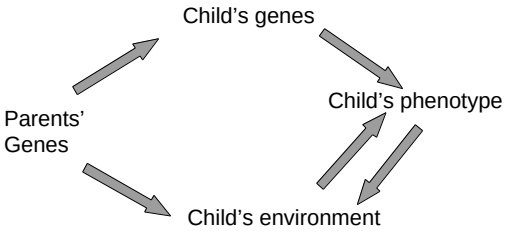
- Physical changes
- Neurological changes
- Cognitive changes
- Specific experiences

Physical Changes

- Rapid growth
- Weight gain
- Body strength
- Agility
- Fine motor control

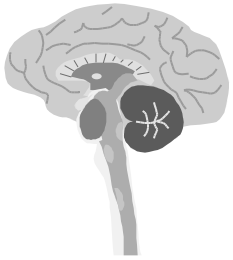
And the lose their teeth!

Recall:
Evocative Gene-Environment Interactions



Neurological Development

- Electrical activity
- EEG
  dominant type
  coherence

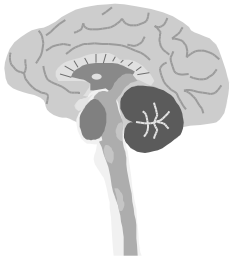


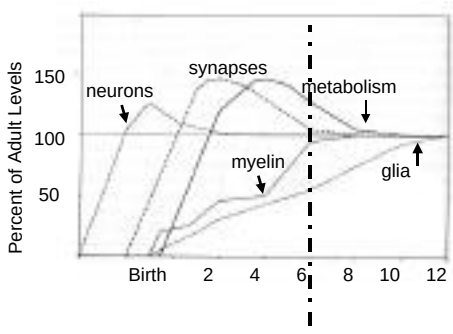
Stauder et al., 1993

- Conservers and nonconservers
- Ages 5 to 7
- ERP
- no diff on “oddball” task
- diff on conservation task

Neurological Development

- Myelination





From Janowsky & Carper, 1996

Note:

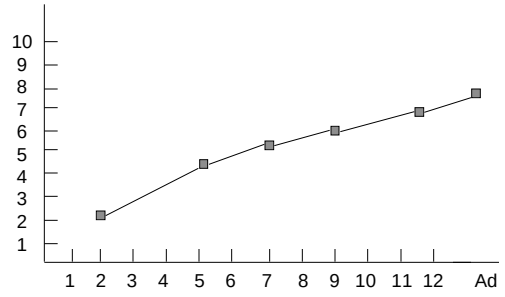
- EEG/ERP with kids is tricky
- Many possible interpretations
  e.g., myelination (threshhold or stabilization?
- And, as always...

Be wary of correlational data

Cognitive Changes

- Memory Span
  - –Speed of processing
  - –Knowledge Base
  - –Memory Strategies
  - –Metamemory
- Inhibitory control

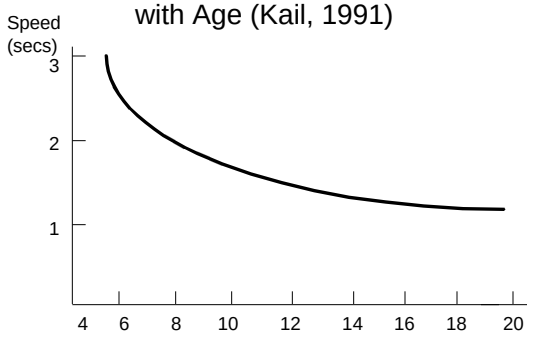
Improvement in Memory Span for Numbers as a function of age (Dempster, 1981)



Why the change?

- Speed of processing
  - Cross-cultural research
    - Chinese vs English
  - Word length Study
  - Retrieval Studies

Changes in Speed of Processing with Age (Kail, 1991)



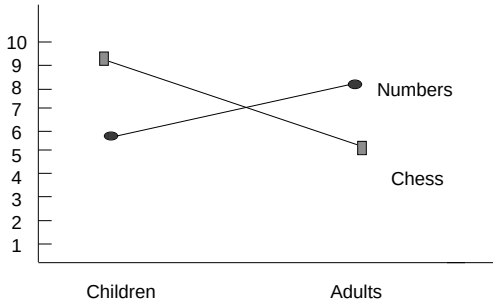
Also changes in:

- Familiarity with numbers
- Speed can say them

World Knowledge

- What is the most unmusical band in the world?
- A RUBBER BAND!!!!!!
- Why did the one-armed man cross the road?
- TO GET TO THE SECOND-HAND SHOP!!!!!

Immediate Recall for Chess Pieces and Numbers: 8- to 10-yr-olds & adults (Chi, 1978)



the more you know...

- Information organized better
- Frees up capacity so can process more information
- Allows for more “executive” processing

Also changes in:

- Knowledge about memory strategies
- Selection of strategies

Strategies

- Rehearsal
- Organization
- Mnemonics
- Elaboration

What brings about memory changes?

- Increase in speed of processing & capacity
- Increase in knowledge
- Acquisition of strategies for remembering
- Metamemory

Metamemory

- What is easy/hard to remember
- How well they can remember
- Which strategy to use in different situations

Age or Experience?

- Unschooled children and adults rarely use strategies on “lab” tasks

Rogoff & Waddell, 1982

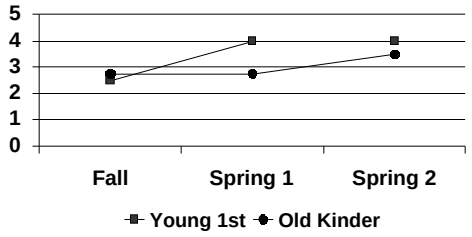
Studying Schooling Effects

- Methodological problems
  - biased samples-
    - wealth
    - child's intelligence

School Cut-Off Strategy

- Compare K and 1st graders-differ in age by a month or so
- Morrison, et al (1995)*
  Free recall 4 sets of 9 common objects (pictures)

Mean Recall by “Young” 1st Graders and “Old” Kindergartners



Conclusions

- Dramatic changes in children’s thinking and behavior at the onset of middle childhood
- Changes reflect interaction between children’s new abilities AND specific experiences